

IN THE CLAIMS:

Please cancel claims 1-13 without prejudice or disclaimer, and substitute new claims 14-26 therefor as follows:

Claims 1-13 (Cancelled).

14. (New) A method of decoding variable-length encoded signals including codewords from a codebook, said codewords having associated respective sets of sign bits, comprising the steps of:

providing a signed decoding codebook including extended signed codewords, each extended codeword including a respective codeword in said codebook plus the associated sign bit set; and

decoding said variable-length encoded codewords by means of said signed decoding codebook, whereby said codewords are decoded together with the sign bit set associated therewith.

15. (New) The method of claim 14, comprising the steps of:

defining a threshold value for the length of said codewords, wherein said threshold value partitions said codewords in short and long codewords, respectively; and

decoding at least said short codewords by means of a lookup process against a respective lookup table whose entries are selected to correspond to the extended codewords in said signed decoding codebook.

16. (New) The method of claim 15, wherein said codewords in said codebook have a maximum length, and said threshold value is selected in the vicinity of half said maximum length.

17. (New) the method of claim 15, comprising the step of decoding said long codewords by means of a multi-step lookup process, said multi-step lookup process comprising:

a first lookup step to a first entry in a first lookup table to retrieve an offset value, and

at least one second lookup step to at least one second entry in at least one second lookup table, said second entry being identified by means of said offset value.

18. (New) The method of claim 17, comprising the step of arranging said first lookup table and said at least one second lookup table as nested lookup tables in a container table.

19. (New) The method of claim 17, wherein said first entry to said first lookup table comprises:

a first field, identifying the codework to be decoded as a short codeword or a long codeword, respectively;

a second field comprising:

the length of said codeword if said codeword is either of a short codeword or a long codeword completely decoded, or

said offset value if said codeword is a long codeword still to be partly decoded; and

a third field including the completely decoded symbols.

20. (New) A system for decoding variable-length encoded signals including codewords from a codebook, said codewords having associated respective sets of sign bits, comprising:

at least one memory having stored therein data items defining a signed decoding codebook including extended signed codewords, each extended codeword including a respective codeword in said codebook plus the associated sign bit set; and

a processing unit adapted to receive variable-length encoded signals and to interact with said at least one memory to decode said variable-length encoded codewords by means of said signed decoding codebook stored in said at least one memory, whereby said codewords are decoded together with the sign bit set associated therewith.

21. (New) The system of claim 20, wherein

said memory comprises stored data items defining a respective lookup table whose entries are selected to correspond to the extended codewords in said signed decoding codebook; and

said processing unit is configured for:

defining a threshold value for the length of said codewords, wherein said threshold value partitions said codewords in short and long codewords, respectively, and

decoding at least said short codewords by means of a lookup process against said respective lookup table.

22. (New) The system of claim 21, wherein said codewords in said codebook have a maximum length and said threshold value is in the vicinity of half said maximum length.

23. (New) The system of claim 21, wherein
said memory comprises stored data items defining:
a first lookup table including a set of entries leading to respective offset values,
and
at least one second lookup table including second entries identified by said
respective offset values; and
said processing unit is configured for decoding said long codewords by means of
a multi-step lookup process, said multi-step lookup process comprising:
a first lookup step to a first entry in said first lookup table to retrieve an offset
value, and
at least a second lookup step to at least a second entry in said at least one
second lookup table, said second entry being identified by means of said offset value.

24. (New) The system of claim 23, wherein said memory is arranged as a
container table including said first lookup table and said at least one second lookup
table as nested lookup tables.

25. (New) The system of claim 23, wherein said first entry to said first lookup
table comprises:

a first field, identifying the codeword to be decoded as a short codeword or a long
codeword, respectively;

a second field comprising:

the length of said codeword if said codeword is either of a short codeword or a long codeword completely decoded, or

said offset value if said codeword is a long codeword still to be partly decoded; and

a third field including the completely decoded symbols.

26. (New) A computer program product capable of being loadable in the memory of at least one computer and including software code portions for performing the method of any one of claims 14 to 19.